In the Claims:

1-112. (Cancelled)

113. (Currently Amended) A process for treatment of a silica-containing aqueous feed stream using an evaporator, said process comprising:

(a) providing a feed water stream containing soluble and insoluble inorganic and organic species therein, said species comprising:

(I) multi-valent metal cations,

(II) alkalinity,

(III) at least one molecular species which is at low ionization levels when in solution at around neutral pH;

(b) removing a portion or substantially all multi-valent metal cations from said feed stream to a non-precipitating residual level by passing said feed water stream through a cation ion exchange system, and

(c) processing the feed water stream by:

(I) removing substantially all non-hydroxide alkalinity from said feed water stream; and

(II) raising the pH thereof to at least 9 or higher;

(d) ~~passing the product from step (c)~~feeding the feed water stream having a pH of at least 9 or higher into ~~said~~ an evaporator, wherein said evaporator:

(I) contains a plurality of heat transfer surfaces,

(II) contains a circulating high solids solution, and

(III) wherein the pH of said circulating solution is maintained to at least 9, or higher; and

(e) condensing the vapor produced by the evaporator to produce a ~~low solute containing~~ distillate stream, the evaporator also producing a high ~~solute~~ solids containing blowdown stream.

114. (Previously Presented) The process as set forth in claim 113, wherein the step of said multi-valent cation removal is accomplished in a weak acid cation ion exchange system operated in a hydrogen form.

115. (Previously Presented) The process as set forth in claim 113, wherein the step of said multi-valent cation removal is accomplished in a weak acid cation ion exchange system that is operated in a sodium form.

116. (Previously Presented) The process as set forth in claim 114, wherein said feed water stream contains more multi-valent cations than alkalinity, and further comprising, before feeding said feed water to said weak acid cation exchange system, the step of adjusting the ratio of multi-valent cations to alkalinity by adding a base to said feed water, so as to raise the alkalinity of said feed water.

117. (Previously Presented) The process as set forth in claim 114, wherein said feed water stream contains more alkalinity than multi-valent cations, and further comprising, before feeding said feed water to said weak acid cation exchange system, the step of addition of acid to said feed water, so as to remove the excess alkalinity in said feed water.

118. (Previously Presented) The process as set forth in claim 113, wherein the step of multi-valent cation removal is accomplished by passing said feed water through a sodium form strong acid cation ion exchange system.

119. (Previously Presented) The process as set forth in claim 113, wherein after removing substantially all non-hydroxide alkalinity from said feed water stream dissolved gas is removed from said feed water stream.

120. (Cancelled)

121. (Currently Amended) The process according to claim 113, wherein said evaporator ~~comprises~~ is falling thin film evaporation equipment operating as a single unit or in series or parallel, or ~~comprises~~ forced circulation evaporation equipment which operates as a single unit or in parallel, or natural circulation evaporation equipment which operates as a single unit or in parallel, to generate said distillate stream and said high solids blowdown stream.

122. (Currently Amended) The process as set forth in claim 121, wherein said evaporator is operated in ~~one of~~ a steam driven multiple effect mode, or a mechanical vapor recompression mode, or a thermal compression mode, or as a multiple stage flash evaporator.

123. (Previously Presented) The process as set forth in claim 113, further comprising heating said acidified feed water stream to enhance gas removal in a degasifier prior to entering said evaporator.

124. (Previously Presented) The process according to claim 113, wherein the step of raising the pH is accomplished by addition of a base in aqueous solution, said base selected from the group consisting of sodium hydroxide, sodium carbonate, potassium hydroxide, and potassium carbonate.

125. (Previously Presented) The process according to claim 113, wherein the step of raising the pH is accomplished by addition of an aqueous organic base.

126. (Currently Amended) The process according to claim 113, wherein said feed water stream is ~~comprises one of~~ cooling tower blowdown, scrubber blowdown, water utilized in ash transport in a coal fired steam-electric power plant, ash pond water, ash-sluicing water, effluent from sewage treatment, effluent from a food processing treatment, boiler blowdown, a concentrated stream from membrane separation equipment, effluent from oil refining operations, or effluents from hydrocarbon recovery operations.

127. (Previously Presented) The process as set forth in claim 113, wherein the step of multi-valent cation removal is partially accomplished by passing said feed water stream through membrane softening equipment, or by increasing the pH to at least 10 in said feed water stream and passing the pH adjusted stream through membrane separation equipment to filter out hardness precipitate.

128. (Previously Presented) The process as set forth in claim 113, further comprising, during the step of removing alkalinity, the additional step of removing substantially all non-hydroxide alkalinity not associated with hardness.

129. (Previously Presented) The process as set forth in claim 113, wherein the steps of removing multi-valent cations, and removing alkalinity and increasing pH are accomplished prior to a membrane process to pre-concentrate the feed stream upstream of said evaporator described under step (d).

130. (Previously Presented) The process as set forth in claim 113, wherein said low ionized species when in neutral or near neutral pH aqueous feed stream comprises silica (SiO_2).

131. (Previously Presented) The process as set forth in claim 113, wherein said low ionized species when in neutral or near neutral pH aqueous feed stream comprises meta/ortho silicic acid (H_4SiO_4).

132. (Previously Presented) The process as set forth in claim 113, wherein after step (c) (II) and prior to step (d), the process further comprises the step of removing dissolved gas in a degasifier.